Edgar F. Cyriax

# EDUCATION.

## ON GYMNASTICS,

or

## BODILY EXERCISES.

BY

*MADAME DE SILLERY-BRULART*

(formerly Countess de Genlis).

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# EDUCATION.

## GYMNASTICS.

Without recurring to antiquity for instances of bodily strength that would in the present day appear miraculous, a view of the armour of our ancient French knights is sufficient to shew how greatly the human species is in this respect degenerated. Where is the man now to be found who could walk a mile clad in a suit of such armour, without sinking under its enormous weight? Yet every knight wore it for months together; and travelled, ran and fought under the load. Since the execrable invention of gunpowder, an artificial and succedaneous strength has rendered personal vigour nearly useless in war: but in common life the exercise and perfect developement of man's physical powers are still equally necessary. The object of gymnastics, considered as a part of education, is to strengthen the constitution, establish the health, enable us to undergo fatigue, give agility, address, suppleness, force, and that confidence which confirms courage, and makes us perform extraordinary actions without danger; in fine, to fortify us against all the accidents of life, and determine the growth of the body to the last degree of extension that nature can give it. For it is not to be supposed that a young man, brought up effeminately, will acquire that shape and size which a good education would have procured him. Effeminacy and corruption of manners in early youth oppose nature's efforts and intentions, stop her slow but wise progress, and produce rickety and dwarfish beings, those weak effeminate creatures, full grown at sixteen and decrep-

it at forty-five. For some years I was entrusted with the care of a child (my nephew), to whom I paid as much attention as my duty to my pupils would permit. My care was particularly turned toward his health, which was in a deplorable state: we were apprehensive for his lungs, and that he would be deformed, and he was beside little, weak and thin to an extreme degree. I gradually and with proper care made him pursue the exercises performed by my pupils: like them I made him sleep on wood, a custom excellent on a thousand accounts, particularly as to the shape and the lungs, as it prevents catching cold, which is generally occasioned by perspiration at night, excited by the heat of mattresses, and checked upon getting out of bed (particularly in winter) by the cold morning air. Six months ago I returned this child to his father, and I do not think there can be found a finer, stronger, or more active young man, of the age of fifteen, better and more regularly formed, or of a more robust constitution. The following are the means I adopted with respect to this part of education.

SHOES WITH LEADEN SOLES,

which my pupils wore from the time they were put under my care to their quitting me. These soles were at first very thin, and their thickness was insensibly increased. When M. de Chartres left me each of his shoes weighed a pound and a half, consequently the two weighed three pounds, and with this weight he ran, leaped, and walked, three or four leagues at a round pace without being in the least fatigued. The shoes of Mademoiselle d'Orleans weigh at present two pounds; she never wears any others, except when she dances; she walks and runs with them without any appearance of being thus loaded; in the mean time her constitution is naturally very delicate, and she is not yet fourteen years of age. Beside the strength and swiftness which the habit of wearing such heavy soles must necessarily give, it has two other advantages attending

it, that of guarding the feet from all dampness, and promoting the growth by gently stretching the muscles of the legs.

THE EXERCISE OF DUMB BELLS

which I directed to be performed before breakfast, and which continued only for ten or twelve minutes. It is an ancient exercise which Galen prescribed to his convalescents: a full account of it may be seen in the *Encyclopedie*, from whence I took it, under the word *halteres*. After this exercise the children carried, for an equal portion of time, pitchers full of water. In the country they crossed a considerable space of the garden, filled their pitchers at a natural fountain, and carrying it into their chamber filled the decanters for dinner. As this exercise had a useful object, they performed it in the country with pleasure; but at Paris, where we had no natural spring, they carried pitchers full of sand from one apartment to another, and as it was then merely a lesson it was repeated without desire or alacrity. These exercises therefore should have an appearance of utility, which is very easy in the country, but very difficult at Paris. The size of the pitchers is to be increased as the children grow older: they should be round, with a small opening, and the handle instead of being on the side, should cross the mouth. The two exercises just mentioned were performed on rising in the morning, and before breakfast.

THE EXERCISE OF THE PULLEY.

M. Tronchin originally invented this, and formerly practised it with success in amending the shape of deformed children. He related the circumstance to me thirteen years ago, and I immediately applied the idea to education. This pulley, fixed to the wainscot, resembles exactly that of a well, but instead of a bucket a leathern bag filled with sand is fastened to the rope. Round the pully I directed a close balustrade to be placed to prevent any accident from the fall of the weight. In performing this exercise the child must

stand perfectly upright, his feet close together, never rising on his toes when he pulls the rope, and not letting it slide through his hands in lowering the weight. In the country it was performed at real wells, placed in the children's little gardens. The wells were constructed of large casks, over which the pully was fixed, and from these they drew water; and as the size of the buckets could not be increased, because it was necessary to proportion them to that of the well, I contrived buckets with a double bottom into which weights might be put at pleasure.

THE EXERCISE OF THE DOSSER *.

This I had ordered so as to interrupt the drawing lesson for a quarter of an hour. In the midst of the lesson the children rose, took upon their shoulders dossers proportioned to their size, and loaded according to their strength, and with these they went down and up several pair of stairs. When M. de Chartres set off for Vendome, he could carry in his dosser two hundred and twenty-five pounds, which no person belonging to the house could do with forty pounds less.

EXERCISE OF THE ROPE.

This is a large rope fastened to a staple in the ceiling in the middle of the room. The exercise, which is fit only for boys, consists in ascending to the ceiling by means of this cord; this is very difficult without the assistance of the legs, that is, by keeping them asunder, instead of twining them round the rope, because all the weight of the body rests entirely on the wrists. Difficult, however, as it is, M. de Chartres, his brothers, and my nephew, performed the exercise equally well in this manner. This capability of ascending and descending readily by the help of a single rope, may be of great use on a thousand occasions in life. In case of a fire, if the flames should render it impossible to escape by the doors; in travelling, if we wish to descend into those deep and cu-

* A sort of basket to be carried on the shoulders. T.

rious grottos which many travellers, for want of this practice, have not been able to see, or at least have incurred great danger. This exercise, as well as that of the pully, I employed as a relaxation between their studies; and in the winter, at Belle Chasse, between each language lesson, and after our reading, my pupils exercised themselves in one of these two ways, or in a *trial of strength of wrists* (lutte des poignets) for ten or twelve minutes.

THE EXERCISE OF WEIGHTS AT THE FEET.

This was an invention of M. de Montpensier and my nephew, who practised it every day for six months. This exercise astonishingly increased their growth. The pupil fixes to each foot a weight as heavy as he can carry, without great exertion; he then raises himself by his hands on the rope fixed to the ceiling, till his feet are at some distance from the ground, and for some minutes contracts and extends his legs alternately with considerable force. The weights which M. de Montpensier fastened to his feet last winter amounted together to fifty pounds, consequently weighed twenty-five pounds each.

LEAPING.

There are three modes of leaping; first horizontally; secondly, over something raised above the ground; thirdly, from a high place to the ground. The last is dangerous, as in this kind of leaping there is a risk of breaking the leg, if it deviate ever so little from the proper direction in falling. This exercise therefore should be proscribed; especially as a perfect master in the other two modes will leap well in this, if ever he should be under the necessity of risking it to avoid a great danger. In the garden of the country-house, where we spent our summers, I caused a piece of ground about twenty feet square to be dug up. This piece of ground, which was called *the leaping ground* (sautoir), was situated under the windows of my chamber, and on a large green where the exercises of run-

ning were performed, so that without quitting my chamber I could see the children run, leap, and play at prison-bars. As the earth in this leaping-ground was soft they could receive no injury by falling. They thus leaped at full speed, that is to say, taking a distance to run: this distance should neither be too short nor too long; twelve or fifteen paces are sufficient. In leaping, the feet should not be separated from each other, and the legs should be thrown forward, so that if the child fall his position might be that of sitting on the ground: if he fall on his knees it is a proof that the leap was not well performed. For the high leap I placed two forked sticks on the border of the leaping-ground and between them suspended a cord. The object is to leap over this cord, which may be done in two ways, either by taking a run, or with the feet close, that is, without a run. The cord is only to be hung upon the sticks, and not fastened to them, in order that it may give way if the child should not clear it; for if his feet were to be caught in it, the resistance would make him fall in a dangerous way on his back, and out of the leaping ground. When the pupil is perfect master of this mode, he may venture to leap over real bars, taking care that their height be less than he is accustomed to clear with ease; for instance, if he commonly leap four feet with the loose cord, the bar should be no more than three feet, and we may be sure that, if any imminent danger should require his leaping over a bar, or any similar obstacle, he would then rise as high as if it were only a cord. At this kind of exercise M. de Chartres did not excel the rest of my pupils; but in the horizontal mode, he could clear at a running jump a space of twenty-one lengths of his own foot.

RUNNING.

This exercise I had divided into two kinds; one a trial of speed, the other of long windedness. In the latter the pupil does not exert all his force, and by

habit a child may run a long time. Mademoiselle d'Orleans at twelve years ran a league without stopping or walking a single instant. No one is ignorant, that in walking, the body should be erect, the toes turned out, and the leg advanced before the body at each step; for it is impossible to walk well if we advance the body and the leg at the same time. In running it is quite the reverse; the body must be inclined forwards, the toes turned neither in nor out, and the body advance with the legs.

### WALKING, RUNNING, AND LEAPING ON THE TIGHT ROPE.

I employed a rope-dancer a whole winter to teach my pupils this exercise. They took their lessons when they rose from table, as it is not at all fatiguing, and requires no exertion. This exercise gives agility and boldness: it teaches a person to walk with address and safety in the narrowest and steepest path, which in travelling, and on many other occasions, is of no small utility.

### RIDING.

Of this M. d'Orleans gave his children the first lesson, and has since precided at almost all they have taken. They all mount on horseback with courage and skill, leap bars, ditches, &c. M. de Chartres, though he does all these things, has the least inclination to this exercise, and M. de Beaujollois is in this respect a most astonishing youth. Like his brothers, he will travel twenty leagues on horseback and two or three on foot in the same day, without being in the smallest degree fatigued; but it must be observed that he has been exercised from his earliest infancy in every thing that could render him strong and hardy. When he was put under my care he was only three years old; and there is not a child living of his age that posseses his agility, address, and strength. If these happy physical qualities were sedulously cultivated, at seventeen he would assuredly be a prodigy in this respect:

but of this I have not the smallest hope, since within the four months that he has been no longer under my care, he has been made to give up, almost all the exercises which I directed him to perform, and in which he excelled.

SWIMMING.

Of this too M. d'Orleans gave his children the first lessons, and has frequently swum with them since. They all swim perfectly well, leaping into the water head foremost. M. de Chartres saved the life of a man (inspector of bridges and roads at Vendome) who was on the point of being drowned, by leaping into the river the moment he heard his cries. I know nothing of this art, but I recommended two things; that they should sometimes be thrown into the water with all their clothes on, because people are commonly in this state when they fall in by accident, and that they should be carefully instructed in the methods proper to be pursued to succour and bring to shore a person in danger of being drowned.

ARCHERY.

Neither M. de Chartres nor his brothers were fond of this exercise, which has in it more gracefulness than utility; but Mademoiselle d'Orleans and the young persons brought up with her handled the bow with considerable dexterity.

SHOOTING.

As I was very desirous that my pupils should never be enamoured with the sports of the field, the delight only of the idle, and a passion fatal to the people before the revolution, I never encouraged them in this exercise, and they were therefore very indifferent about, and scarcely ever pursued it.

MILITARY EXERCISE,

which they partly learned under my inspection. To this they applied themselves with zeal and activity.

BILLIARDS.

I had no desire that they should excel in this, for

I wished them to have as little inclination for gaming of any kind as for the chace. They played at billiards only by way of exercise, when the weather would not permit them to walk out; yet they played tolerably well.

SHITTLECOCK.

In this I procured a tennis-player to give them lessons. To play well, the racket must not be held before the player, near the stomach, nor above the head, but by the side, and thus the shittlecock is to be struck. Children should be accustomed to play equally with both hands.

DANCING.

These are all the exercises I made them pursue, and the success exceeded my expectation, for in this branch of education I was less seconded and more thwarted than in any other. It was particularly on account of these that I was accused of having a systematic turn of mind, of being *wedded to systems*, &c. Those leaden soles, beds of wood, baskets, dumb-bells, pitchers, and pulleys, were thought cruel and whimsical inventions. It was said at first, that *such foolish conceits, such extravagant systems, would kill the poor children, whose delicate constitutions were unable to support so Spartan an education.* Afterwards when all these delicate children visibly grew more robust; when the defective shape of some of them entirely disappeared; when their health became daily more confirmed; when without effort they were able to bear fatigue which men would with difficulty have supported; when, their tempers and dispositions feeling the effects of their happy constitution of body, they became cheerful, active, and lively, nothing more was said. My coadjutors, however, never presided with any degree of zeal at these exercises, which were in general performed well only when I was present. Either what I directed was forgotten, or was regarded with indifference and inattention. The six winter months

which we spent in the capital were also detrimental to many of these exercises, particularly after the residence of the king was fixed at Paris. Before that period we had a very charming garden within the precincts of the Tuileries, where I had caused a leaping-ground to be made, and where my pupils went every morning to exercise themselves in running, jumping, and climbing trees. But having for the last two years been deprived of this garden, it was impossible they should make the same progress. I was very desirous of passing a whole year together in the country with my pupils, in a solitary place, and at a distance from any capital. Had it not been for the troubles by which France has been agitated, I should have executed this project during the last year that M. de Chartres was with me, and it is in this manner that every education ought to be finished: but I have never been able to effect but in part, and very imperfectly, the plans I have formed. I mention them, however, as far as I am able, in the hope that other preceptors may follow them, improve upon them, and experience in their execution fewer obstacles and contradictions. Beside the moral advantages which would have accrued from a whole year of absolute solitude, and from studies pursued without interruption, at an age when the faculty of reason is expanded, I could have wished to accustom my pupils to the rigours of a winter in the country. I would have exercised them in sliding on the ice, running in the snow, braving the severest cold, climbing slippery rocks covered with ice; for I would have chosen a wild and picturesque situation, and they would have admired nature under a new and austere form. Instead of this grand and striking spectacle, they have seen, during their winters, nothing but mist and mud, and their eyes have never been struck with the bright splendour of sheets of ice, and a pure dazzling snow. Before I terminate this article upon the subject of gymnastics, I ought to make one ob-

servation, which is of no small importance; that all bodily exercises are salutary only when their performance requires no painful exertion. If they fatigue, if they depress, if they leave behind them a continual sensation of pain and weariness, they debilitate instead of strengthening; but a due gradation in applying them, and habitual use, render easy the most violent. The gradation must be varied according to the subject, and the best and safest rule that can be laid down is, to examine attentively and consult the child on every exercise that he is directed to perform. He should exert all his strength, but the weight should be diminished if it appear to occasion him the least pain. I will only say in general, that the method of making an insensible addition daily is a very bad one. Twelve years ago I made this experiment as to the pulley. Every day I put into the bag a tea-spoon full of sand, and I found that the child strained as much to hoist it at the the end of two months as the first day, which ought not to be the case I then took out of the bag sixty tea-spoons-full. The child did not appear to raise it any easier at first, but in a fortnight he could do it with extreme facility. Thus at every new exercise, or new addition, the child ought to strain a little, but without finding this effort painful. At the end of ten or twelve days he should not strain at all. If the contrary should take place, it is a proof that the weight is too great, and it ought to be diminished a little; and when the child has acquired the capability of hoisting or carrying a weight without difficulty, he ought to persevere for three or four months, at the end of which time the weight is to be increased to what he can bear without great exertion, unless the exercise has been interrupted; and in that case, on resuming it, the weight should be somewhat less than it was on his quitting it.

When a child is in his fifth year, we ought to begin to exercise him in running, to make him carry light burdens, drive wheelbarrows proportionate to his

size, at first loaded with grass, afterwards with branches of trees, sand, &c. When he has completed his fifth year, leaden soles, very light and thin at first, should be added to his shoes. In the case of a girl, these soles should be fastened to the shoes by a ribbon passed round the bottom of the leg. This precaution is not necessary for boys, whose feet are not concealed by their clothes, and whose leather shoes are less liable to come off than stuff slippers. At six he should begin to carry the dosser and pitchers, and successively in the course of the year, all the exercises should be begun with light weights. My grand-daughter, whom I am now educating, and who is just turned of five, hoists up thirteen pounds with the pulley, without any exertion. Three months hence, when the hot weather is over, I shall add two pounds more, for we should always take care to avoid increasing the weight during the excessive heat of summer. Her shoes with leaden soles, which she has been in the habit of wearing for four months, have, during the two past months, weighed ten ounces and a half; those of a child of the same age and size weigh without leaden soles three ounces, and thus she carries an extra weight of seven ounces and a half, that is to say, nearly half a pound. This weight I shall not encrease these three months, and then only half an ounce, because the progressions of weight should be particularly slow and insensible from the age of five to eight, on account of shedding the teeth, which takes place in that interval, during which we should be careful not to fatigue the child, though it is at the same time highly necessary to augment his strength. Another child nine years of age, whom I have had under my care for twelve months, but whose physical education was before very defective, and whose constitution is extremely delicate, began these exercises only three months ago. She hoists with the pulley twenty pounds; her shoes with leaden soles weigh twelve ounces; those

of Mademoiselle weigh two pounds; each shoe consequently weighs a pound. Mademoiselle carries in her dosser sixty-two pounds; but it is to be remarked, that the revolution in her health, occasioned by my departure, and the nervous effects that were the consequence, have thrown her back in all these exercises; she could not resume them till after an interruption of three months, and then with a diminution of all the weights. For example, before my departure she hoisted forty pounds with the pulley, and now she can hoist only thirty-four. Eight months ago M. de Beaujollois hoisted forty-seven pounds: he was then only eleven years old. I must observe, that a person never will be able to raise with a pulley so great a weight as he can carry in his dosser. Mademoiselle d'Orleans carries in this way sixty-two pounds, yet she can hoist but thirty-four. M. de Chartres carries two hundred and twenty-six pounds, and hoists only ninety-six: meanwhile this was more than any man who came to the house could hoist with ease. From numerous observations which I have made, it appears to me, that the strongest man cannot hoist a weight greater than that of his own body, yet by habit he may be able to carry three or four times that weight. I have farther observed, that the increase of strength is particularly perceptible from fifteen to seventeen, especially in the last year. M. de Chartres, for example, carried at seventeen two hundred and thirteen pounds; two months after, he carried two hundred and twenty-six; at the expiration of three months, he was preparing to increase this weight, when he set off for Vendôme. Unfortunately I have only been able to pursue this progression to the age of seventeen, never having had an opportunity of prolonging an education beyond that term; but I have reason to believe that this increase of strength continues at least to the age of twenty-four or twenty-five. Hence it would follow, that a young man, accustomed from his infancy to these

progressive exercises, and continuing them to that age would acquire a degree of strength of which we can scarcely form an idea *. In this recapitulation it has been seen, that I made them pursue certain studies and exercises with a view to the utility which may be derived from them in travelling. The following was my motive: I am of opinion that the education of a young man cannot properly be finished till the age of nineteen or twenty. I knew that my pupils would be taken from me as soon as they should have attained their seventeenth year; and I anticipated, if not with dread, at least with regret, the moment when I should see them enter upon an empty, trifling world, where the least fault to be acquired is a habit of idleness, and a dislike of study and serious conversation. I had sufficient confidence in the principles I had taught them, not to fear their falling into the vices and shameful irregularities so common in the present day: but I beheld them at an age when the mind is as yet not perfectly formed, and surrounded with all the examples and seductions that retard the progress of reason, blind the understanding, deprave the taste, and debilitate the soul. The only way that appeared to me calculated to preserve them from these dangers was to inspire them early with a desire of travelling as soon as they should be their own masters. It is by no means difficult to impart this desire to those who have imbibed every species of knowledge which can render travelling truly agreeable. I took care that they should learn to travel with advantage, to make a jour-

* These exercises gave M de Chartres and his brothers a degree of bodily strength superior, beyond comparison, to what is usual at their age; yet, notwithstanding my vigilance, these exercises were in general neither well nor regularly performed. M. Lebrun, as I have said, disliked them, and they were therefore indolently executed, except under my own eyes. Judge then from the accounts I have given of the degree of bodily strength these children would have acquired, had all the tutors in this respect possessed my zeal and punctuality.

nal to discriminate wisely, to enquire, to listen, and to derive information from every thing they might see. After these cares, I was certain that if they were permitted, the first use they would make of their liberty would be to traverse all the provinces of France, and then to visit foreign nations. There they might, without my assistance, have completed their education. Travelling cannot benefit an ignorant young man, who has no knowledge of history and the arts: on the road he travels post from place to place; in cities he goes to the play and other public amusements, is presented at the houses of the great, and spends his time in visits. He might as well stay in Paris. But a well-informed youth, properly educated, sees every thing with a degree of interest and curiosity; he will not be constantly shut up in a carriage, but will perform the greater part of his journey on foot, or on horseback; he can admire a beautiful landscape, and knows how to transfer it to paper; he will examine the plants with which he is unacquainted; the manners of the peasant will be far more interesting to him than those of the metropolis; frequently will he stop at the door of a cottage; willingly will he repose in a barn; he who has been accustomed to sleep on boards will not be distressed because his lodging is homely. If, in order to see a natural curiosity, a grotto, a singular cascade, it be requisite to climb steep rocks, to walk in narrow paths formed by nature on the brow of a precipice, to descend into a deep cavern by the help of a ladder or a single rope, he will not hesitate, he will go without fear and without danger, for these were the sports of his infancy. Should it be necessary in a desert that can be traversed only on foot, to carry two day's provision, he will cheerfully share the fatigue with his guide; he will say; *This burden is nothing, my dosser weighed a hundred and fifty pounds more**. Should



* Three years ago M. de Chartres made this answer to a person who asked him the day on which he was admitted a knight of the

he visit a sea-port, he will make some stay there; he will compare the wealth, industry, and resources of this foreign mart with those of his own country already familiar to him. He will go into all the manufactories, into the dock-yards, on board the vessels; he will enjoy and feel all the value of the esteem shewn him by his conductors, who in their turn will be astonished to see a Frenchman of seventeen well informed without being vain. Having satisfied the veteran seaman with the solidity of his knowledge, he may possibly have the ambition to astonish the young mariner by his activity, and, before he quits the ship, spring with agility to the yard-arm or the mast-head. In cities he will frequent society, to learn their manners and customs, but it will be society of his own choosing: as he loves neither gaming nor the pleasures of the table, he will not visit those who keep open houses; he will seldom also be seen in the palaces of kings: he seeks new objects, all courts resemble each other, and he who has seen one knows all. Fond of literature and the arts, he will be eager to find out those who cultivate them with success; he will derive no small pleasure in conversing with them in their own language, in shewing them that he is not ignorant of the history of their country, and that he is a stranger to no kind of knowledge. With them he will visit the cabinets of the curious, and the workshop of the artist. All the studies which he has just quitted will thus repass before his eyes; and the celebrated pictures, the monuments, and chefs d'œuvres of the arts of every kind that he sees will be engraven so much the more deeply in his memory, as he is acquainted with them before-hand from accurate descriptions. On his return to his hotel, he will not be idle; he knows how to write a journal, a work that will habituate him to every kind of composition: in his will be found sound

order, if he were not oppressed with the *immense weight* of his velvet cloak, embroidered with gold.

criticism, striking relations of customs and manners, sage reflections on laws and government, curious anecdotes, fragments of history, descriptions, and every thing that can paint men and interest the world.—In this manner I dare believe my pupils would have acted, had it been in their power to travel when they quitted me; and this hope and these motives had a considerable influence in the plan of education I pursued.

*From "Madame de Sillery's Lessons to her Pupils."*